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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/645,422

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Chandrabhas Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/491,124.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/21/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 19, reference characters 311-313 are not described in specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 5, 9, 17, 18, 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said communication price" in lines 10-11 of claim 1. There is insufficient antecedent basis for this limitation in the claim. It is not clear to which communication price is applicant referring to since it is being used for the first time in claim 1.

Claim 5 recites the limitation "the transmission band" in line 4 of claim 5. It is not clear from the claim language to which "transmission band" is applicant referring to since in line 2 of claim 5 applicant states, "a transmission band utilized by reserving a transmission band", and in line 3 of claim 5 applicant states, "a transmission band utilized without reserving a transmission band".

Claim 9 recites the limitation "said transformation resources" in lines 6 of claim 9. There is insufficient antecedent basis for this limitation in the claim. It is not clear to which transformation resources is applicant referring to since it is being used for the first time in claim 9.

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Claim 17 recites the limitation "said dependence information" in lines 3 of claim 17. There is insufficient antecedent basis for this limitation in the claim. It is not clear to which dependence information is applicant referring to since it is being used for the first time in claim 17.

Claim 18 recites the limitation "said history information" in lines 2 of claim 18. There is insufficient antecedent basis for this limitation in the claim. It is not clear to which history information is applicant referring to since it is being used for the first time in claim 18.

Claim 19 recites the limitation "said history information" in lines 2 of claim 19. There is insufficient antecedent basis for this limitation in the claim. It is not clear to which history information is applicant referring to since it is being used for the first time in claim 19.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. ***Claims 1-4, 9-13, 14, 17, 20-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwata (USPN 5,933,425).***

**Regarding claim 1, Iwata teaches a data relay processing method [Fig. 4B] wherein at least one piece of information is sent from respective terminals [Col. 5, lines 23-29, terminal 100 sends a request], among a piece of information on schedule of usage of transmission band, another piece of information on schedule of transmission band which is able to be**

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assigned, another piece of information on schedule of a term where an transmission band is able to be assigned or exchanged, and another piece information on a necessary cost when a transmission band is assigned or exchanged [**Col. 5, lines 23-29, terminal 100 sends request for a link required at 20 Mbps**], the sent information is held [**Col. 5, lines 29-33, information is held in a database**], and wherein respective schedules of respective terminals are received [**Fig. 4A shows schedules of various links received**], based on at least information from another terminal which is previously held, transmission band is reserved, assigned or exchanged or communication price is determined [**Col. 5, lines 38-51, different paths are searched for available bandwidth and depending on path rate they are assigned, or exchanged and then assigned**].

Regarding claim 2, Iwata teaches a data relay processing method [**Fig. 4B**] wherein, based on history information of the past processing record with respect to processes of assigning or exchanging of the transmission band between respective terminals [**Col. 5, lines 9-12, the link are stored in the database which is going to be based on history information as indicated in Col. 5, lines 14-18**] and based on information with respect to transmission band, transmission band is reserved, assigned or exchanged or a communication price is determined [**Col. 5, lines 29-33, states assigning is done based on history information, Col. 5, lines 38-51, different paths are searched for available bandwidth and depending on path rate they are assigned, or exchanged and then assigned**].

Regarding claim 3, Iwata teaches history information is announced in terminals [**Col. 3, lines 44-46, existing network conditions will become history information for future communication routes**], and intervals between the announcements are adjustable [**Col. 3, lines**

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**54-56, intervals are adjustable since data is updated whenever link state database are updates which is not going to happen at fixed intervals in a network].**

**Regarding claim 4, Iwata teaches history information is renewed in accordance with whether assigning or exchanging are possible or not [Col. 5, lines 45-59, where topology is updated since one of the paths cannot be assigned and new path is used to route information where topology will serve as history information for new paths].**

**Regarding claim 9, Iwata teaches a data relay processing method [Fig. 4B] wherein in the case that there exist more than two transmission resources that make either one of the processes of reserving, assigning or exchanging transmission bands possible [Col. 5, lines 38-51, there are more than two transmission resources and transmission band is assigned by searching through paths that meet the criteria], by utilizing information on goodness of fit exhibiting a possibility of being selected at least for each of transmission resources that is able to be processed [Col. 5, lines 59-63, minimum sum is calculated and paths will be selected with minimum sum which is goodness of fit model] and information on deadline time of selection [Fig. 2, 207, if max value of C is reached that is the maximum time you have to select a connection or a transmission resource in the instant case], transformation resources are selected or a communication price is adjusted [Col. 5, lines 49-51, path A-C-D-E is selected].**

**Regarding claim 10, Iwata teaches a data relay processing method [Fig. 4B] for controlling announcement intervals of route information for relaying data based on at least one piece of information among loads of terminals for carrying out data processing, a buffer capacity utilized for data processing, transmission quality, and available transmission band [Col. 5, lines 45-59, where topology is based on available transmission band which controls sending**

**a setup packet which has route information for relaying data so in effect available bandwidth controls announcements of new routes].**

**Regarding claim 11, Iwata teaches a data relay processing method [Fig. 4B] for controlling announcement intervals [Col. 3, lines 44-46] of at least one piece of information, based on at least one piece of information among loads of terminals for carrying out data processing, a buffer capacity utilized for data processing, transmission quality, and available transmission band [Col. 5, lines 45-59, where topology is based on available transmission band which controls sending a setup packet which has route information for relaying data so in effect available bandwidth controls announcements of new routes], among loads of terminals for carrying out data processing, buffer capacity utilized for data processing, transmission quality, and available transmission band [intervals are based on available transmission band as described previously].**

**Regarding claim 12, Iwata teaches a data relay processing unit [Fig. 1, Node A] comprising: a transmission band management means wherein in the cast that at least one piece of information is sent from respective terminals [Col. 5, lines 23-29, terminal 100 sends a request], among a piece of information on schedule of usage of transmission band, another piece of information on schedule of transmission band which is able to be assigned, another piece of information on schedule of a term where an information band is able to be assigned or exchanged, and another piece information on a necessary cost when a transmission band is assigned or exchanged [Col. 5, lines 23-29, terminal 100 sends request for a link required at 20 Mbps], transmission band management means holding and managing the sent information [Col. 5, lines 29-33, information is held in a database], and a transmission band reservation**



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means wherein in the case that respective schedules of respective terminals are received [**Fig. 4A shows schedules of various links received**], based on at least information from another terminal which is previously held by transmission band management means [**Fig. 4A, 103, the database information is based on information received from other terminals Col. 5, lines 29-33**], transmission band is reserved, assigned or exchanged or communication price is determined [**Col. 5, lines 38-51, different paths are searched for available bandwidth and depending on path rate they are assigned, or exchanged and then assigned**].

Regarding claim 13, Iwata teaches a program recording medium having programs recorded for making a computer carry out steps of a data relay processing method according to claims 1-4, 9, 10 [**Fig. 1, 104 is a controller that executes a program as stated in Col. 4, lines 62-63**].

Regarding claim 14, Iwata teaches terms of usage schedules of transmission bands according to relative time are appointed in order to describe a variety of schedules for reserving, assigning or exchanging transmission bands or for determining a communication price [**Col. 5, lines 23-29, terminal 100 sends request to reserve a link required at 20 Mbps**].

Regarding claim 17, Iwata teaches an achieved distance of at least one piece of information among history information is controlled [**Col. 2, lines 22-26, link status is the history information which is controlled periodically**].

Regarding claims 20 and 21, Iwata teaches an achieved distance of at least one piece of information among route information for relaying data, loads of terminals for carrying out data processing, buffer capacity used for data processing, transmission quality, and available

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**transmission band is controlled [Col. 2, lines 31-34, route information is controlled based on resource constraints which is available transmission band in this application].**

**Regarding claims 22 and 23, Iwata teaches an achieved distance of at least one piece of information among route information for relaying data, loads of terminals for carrying out data processing, buffer capacity used for data processing, transmission quality, and available transmission band width is controlled based on at least one piece of information among route information for relaying data, loads of terminals for carrying out data processing, buffer capacity used for data processing, transmission quality, and available transmission band [Col. 2, lines 31-34, route information is controlled based on resource constraints which is available transmission band in this application].**

**8. Claim 5-8, 18, 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Chahrouri (USPN 6,603,775).**

**Regarding claim 5, Chahrouri teaches a data relay processing method [Abstract] wherein, in the case that there exists a transmission band utilized by reserving a transmission band [Col. 9, lines 5-9], and a transmission band utilized without reserving a transmission band [Col. 9, lines 33-37, where data flow is adjusted rather than bandwidth being reserved], information on usage frequency of the transmission band utilized by reserving transmission band is defined by dependence information [transmission band reservation depends on a priority parameter], and based on the dependence information and information with respect to transmission band is reserved, assigned or exchanged or a communication price is determined [Col. 9, lines 8-13].**

**Regarding claim 6**, Chahrouri teaches a data relay processing method **[Abstract]** characterized in that, in the case that there exists a transmission band utilized by reserving a transmission band **[Col. 9, lines 5-9]**, and a transmission band utilized without reserving a transmission band **[Col. 9, lines 33-37, where data flow is adjusted rather than bandwidth being reserved]**, information on usage frequency of the transmission band utilized by reserving transmission band is defined by dependence information **[transmission band reservation depends on a priority parameter]**, intervals of announcements of dependence information is controlled **[Col. 9, lines 17-21, signal determines the priority information which is controlled depending on transaction data packets signifying specific intervals]**, transmission band is reserved, assigned or exchanged or a communication price is determined **[Col. 9, lines 8-13]**.

**Regarding claims 7 and 8**, Chahrouri teaches dependence information is renewed at predetermined intervals **[Col. 8, lines 34-42, where the dependence information will be predetermined by operating interval and which is predetermined]**.

**Regarding claims 18 and 19**, Chahrouri teaches an achieved distance of at least one piece of information among dependence information is controlled **[Col. 9, lines 9-13, distance is controlled based on signal]**.

9. *Claims 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Forslow (USPN 6,937,566).*

**Regarding claim 24**, Forslow teaches a data relay unit **[Fig. 2, 54]** comprising: packet classification rules for classifying packets **[Col. 13, lines 13-15, quality of service refers to classification rules]**, a packet classification means for classifying packets based on packet classification rules **[Col. 13, lines 13-15, packets are classified according to quality of service]**

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and PDP which refers to Packet Data Protocol, Col. 3, lines 14-20 describes PDP], band reservation rules for managing rules for reserving transmission bands [Col. 13, lines 15-19 RSVP rules are based on quality of service as described in Col. 10, lines 27-31], and a band reservation means for reserving transmission bands based on band reservation rules and the results of packet classification [Col. 13, lines 15-19].

Regarding claim 25, Forslow teaches packets are classified based on at least one or more pieces of information among IP addresses, port numbers and protocol types [Col. 13, lines 13-15, packets are classified according to PDP which refers to Packet Data protocol].

Regarding claim 26, Forslow teaches band reservation rules describe available transmission bands based on at least one or more pieces of information among IP addresses, port numbers and protocol types [Col. 10, lines 32-34].

Regarding claim 27, Forslow teaches having priority addition rules for managing rules for adding priority information, priority adding means for adding priority [Col. 13, lines 39-42, priority is added according to quality of service], priority processing rules for managing rules of the processing method of priority and a priority processing means for carrying out priority processing based on added priority [Col. 13, lines 13-19, packets are processed according to quality of service].

### *Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chahrouri (USPN 6,603,775) in view of Griefer (USPN 5,615,213).**

**Regarding claim 13**, Chahrouri teaches a data relay processing method as discussed in rejection of claims 5-8.

However, Chahrouri does not teach a program recording medium having programs recorded for making a computer carry out steps of a data relay processing method according to claims 5-8.

Griefer teaches a program recording medium having programs recorded for making a computer carry out steps of a data relay processing method [Col. 5, lines 43-47].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to store a program on a program recording medium to carry out steps of a data relay processing method so that program can be transferred to a data relay processing device [Col. 5, lines 63-67].

**12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chahrouri (USPN 6,603,775) in view of by Iwata (USPN 5,933,425).**

**Regarding claim 14**, Chahrouri teaches a data relay processing method as discussed in rejection of claims 5-8.

However, Chahrouri does not teach schedules of transmission bands according to relative time are appointed in order to describe a variety of schedules for reserving, assigning or exchanging transmission bands or for determining a communication price.

Iwata teaches terms of usage schedules of transmission bands according to relative time are appointed in order to describe a variety of schedules for reserving, assigning or exchanging

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transmission bands or for determining a communication price [Col. 5, lines 23-29, terminal 100 sends request to reserve a link required at 20 Mbps].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have terms of usage schedules of transmission band according to a schedule of reserving transmission band so that controller can first check if bandwidth requested is available [Col. 5, lines 38-40].

13. *Claims 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (USPN 5,933,425) in view of Sudia (USPN 6,009,177) for claims 1-4, and Chahrouri (USPN 6,603,775) in view of Sudia (USPN 6,009,177) for claims 5-8.*

**Regarding claim 15**, Iwata & Chahrouri teach a data relay processing method as discussed in rejection of claims 1-8.

However, Iwata & Chahrouri do not teach a starting point of schedule of transmission band is according to an offset time is appointed in order to reserve a transmission band.

Sudia teaches a starting point of schedule of transmission band is according to an offset time is appointed in order to reserve a transmission band [Col. 36, lines 12-16].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a starting point of schedule of transmission and according to an offset to enable call to be replayed more realistically since present invention can be used for VOIP type of networks [Col. 36, lines 16-17].

**Regarding claim 16**, Iwata & Chahrouri teach a data relay processing method as discussed in rejection of claims 1-8.

However, Iwata & Chahrouri do not teach an extension of schedule of transmission band is according to an offset time is appointed in order to reserve a transmission band.

Sudia teaches an extension of schedule of transmission band is according to an offset time is appointed in order to reserve a transmission band **[Col. 36, lines 12-16, offset from the starting schedule enhancement which is an extension of the schedule from normal schedule]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have an extension of schedule of transmission and according to an offset to enable call to be replayed more realistically since present invention can be used for VOIP type of networks **[Col. 36, lines 16-17]**.

**14. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forslow (USPN 6,937,566) in view of Jacquet et al. (USPN 5,517,501).**

**Regarding claim 28,** Forslow teaches a data relay unit as discussed in rejection of claims 27.

However, Forslow does not teach priority is added based on at least one or more pieces of information among priority of terminals, priority of each media, and priority of each frame.

Jacquet et al. teaches priority is added based on **at least one** or more pieces of information among priority of terminals, priority of each media, and **priority of each frame [Col. 9, lines 1-5, voice and data frames are given different priority]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to give a different priority based on priority of frames since voice data is sensitive to transmission times **[Col. 1, lines 53-59]**.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chandrahas Patel whose telephone number is 571-270-1211. The examiner can normally be reached on Monday through Thursday 7:30 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CBP

  
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